

# DYNAMIC THRESHOLD FOR VCO CALIBRATION

## Abstract

A voltage controlled oscillator (VCO) is provided which includes a threshold level setting circuit operable to set a lower variable threshold level and to set an upper variable threshold level. The VCO includes a frequency band selection unit operable to adjust a frequency band setting of the VCO to one of a plurality of frequency band settings. The VCO further includes a comparator operable to determine whether a control voltage of the VCO falls between the lower threshold level and the upper threshold level. The VCO further includes a threshold adjustment and calibration circuit operable to maintain the frequency band setting when the control voltage falls between the lower and upper threshold levels. Otherwise, when the control voltage lies below the lower threshold level, the lower threshold level is adjusted downward and the upper threshold level is adjusted upward, and when the control voltage lies above the upper threshold level, the frequency band selection is increased to a next higher frequency band.